

REMARKS/ARGUMENTS

The Examiner's attention to the present application is noted with appreciation.

Informalities. The Examiner notes (Office Action at 3) that pages 1 and 2 contain underlines (underlines) of portions of the text, apparently written by hand. Applicant has requested removal of the underlinings by amendment.

Claims Amendment. Applicant has amended claims 7 and 8, added claims 14 to 16 dependent to claim 7, and added new claims 17 to 21. The claims as amended are discussed in further detail below.

35 U.S.C. § 102 Rejection. Claims 7-10 are rejected as being anticipated by Smallheer, separately by Bergamini et al., and separately by Levine et al., and claims 7 to 8 are rejected as being anticipated by Cheng et al. Applicant respectfully traverses this rejection.

Claim 7 is amended to include the additional step of "administering the patient an iron-chelating compound that is unable to promote the formation of hydroxyl radicals from hydrogen peroxide." Support for this step appears at, inter alia, page 2, lines 15-35.

Smallheer and Bergamini et al. disclose administration of adriamycin to treat HIV infection, but do not disclose use of a second substance, i.e., administration of an extracellular iron-chelating compound.

With respect to Levine et al., as noted by the Examiner (Office Action page 5), this reference teaches treatment of HIV-related lymphoma by administration of bleomycin. It is respectfully submitted lymphoma is a carcinoma, which is not "a disease caused by virions." It is known that lymphoma is an AIDS-related complication, but there is no evidence of record to suggest or believe that lymphoma is "caused" by a virion, specifically the HIV virus. As Levine et al. state, "[l]ymphoma is a relatively late manifestation of human immunodeficiency virus (HIV) infection, comprising approximately 3% of newly diagnosed cases of acquired immunodeficiency syndrome (AIDS)..." Thus a comparatively low percentage of patients with HIV subsequently are also diagnosed with lymphoma. Presumably susceptibility to lymphoma is a sequela of HIV infection, but there is no indication that lymphoma is per se "caused" by a virion. In any event, Levine et al. do not disclose use of a second substance, i.e., administration of an extracellular iron-chelating compound.

Cheng et al. is cited only with respect to claims 7 and 8, and does not disclose use of a second substance, i.e., administration of an extracellular iron-chelating compound. It is noted that human papilloma virus (HPV) is a DNA virus, and that claim 9 is drawn to an RNA virus.

35 U.S.C. § 112 Rejections. Claims 7 to 10 are rejected under 35 U.S.C. § 112, first paragraph, on two related grounds. The first relates to use of a “nucleic-acid binding compound” in claim 7. It is submitted that the genus is defined in two different ways. First, it is defined functionally, that is, as a nucleic-acid binding compound which (a) complexes a metal ion, and (b) wherein the complex of the compound and metal ion promotes formation of hydroxyl radicals from hydrogen peroxide. There is no teaching or suggestion of record that ascertaining whether a given compound meets this functional definition would require “undue” experimentation. Further, two examples of compounds meeting the functional definition, adriamycin and bleomycin, are given. There is no reference or evidence of record to suggest that the “potential number of species” is very large, other than the assertion that this is the case. Accordingly, the rejection on this ground cannot be sustained.

With respect to use of the word “derivatives” in claim 8, claim 8 has been amended.

With respect to the 35 U.S.C. § 112, second paragraph, rejection, claim 7 has been amended to make clear that the agent is administered to “the patient.” Claim 8 has been amended to delete “and their derivatives.”

New Claims 17 to 21. New independent claim 17 is added. Claim 17 is drawn to a method of treating “a disease caused by an RNA virus, comprising administering bleomycin to a patient infected with the RNA virus, wherein the patient does not have Kaposi’s sarcoma or lymphoma.” It is submitted that this claim, as drafted, is free of the prior art of record. Both Smallheer and Bergamini et al. teach only treatment utilizing adriamycin. This claim is drawn to use of bleomycin. Cheng et al. disclose treatment of a DNA virus, HPV, and neither disclose nor suggest treatment of an RNA virus. Levine et al. disclose only treatment of a disease that is a potential sequela to HIV infection, namely lymphoma. Levine et al. does not disclose treatment of HIV (a disease caused by an RNA virus) as such. In any event, new claim 17 contains the additional limitation that the “patient does not have Kaposi’s sarcoma or lymphoma.”

Accordingly, Levine et al. does not anticipate the invention as claimed. Submitted herewith in a supplemental Invention Disclosure Statement is a paper by Remick et al. disclosing infusion of bleomycin in AIDS-related Kaposi's sarcoma. However, as is the case with Levine et al., the Remick et al. reference is limited to treatment of a disease that is a sequela to HIV infection, and not treatment of the HIV infection. In any event, new claim 17 contains the additional limitation that the "patient does not have Kaposi's sarcoma or lymphoma."


Conclusion. In view of the above amendments and remarks, it is respectfully submitted that all grounds of rejection and objection have been avoided and/or traversed. It is believed that the case is now in condition for allowance and same is respectfully requested.

If any issues remain, or if the Examiner believes that prosecution of this application might be expedited by discussion of the issues, the Examiner is cordially invited to telephone the undersigned attorney for Applicant at the telephone number listed below.

Also being filed herewith is a Petition for Extension of Time to July 29, 2003, with the appropriate fee. Authorization is given to charge payment of any additional fees required, or credit any overpayment, to Deposit Acct. 13-4213. A duplicate of this paper is enclosed for accounting purposes.

Respectfully submitted,

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